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Diffusion of innovation: Telehealth for care at home

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Abstract

The 'care at home' study focused on a Scottish telehealth service, which was designed to support children with palliative and complex care needs. Using the diffusion of innovation theory, this poster highlights the differences between the way telehealth is used in the public sector and in a third sector or a voluntary organization. Analysis of the data, taken from interviews with key stakeholders, illuminate barriers and solutions as noted by clinicians who see the clear benefits and potential risks of telehealth use at home. In conclusion, it is argued that a strategic steer towards a culture of innovation is needed to support effective use of telehealth in clinical practice. Senior managers in the National Health Service in the United Kingdom need to 'unleash' the goodwill of staff who are eager to exploit innovation in clinical practice.

Keywords:

Telehealth; Palliative care; Complex needs; Paediatrics.

Introduction.

The stated aims of the study were to trial telehealth technology, setup the infrastructure and associated clinical pathways, and study the care outcomes of the children with complex and palliative care needs. We intended to explore remote care in a context where often 'high touch' rather than 'high tech' is most appropriate. The palliative care arm of the study was conducted with Paediatric Oncology Outreach teams, working in the National Health Service (NHS). The phase concerning children and young people with complex needs was supported by a third sector organisation, the Scottish Spina Bifida Association (SSBA). Whilst elements from each section of the study have been reported elsewhere (1) (2), this poster compares the outcomes of each segment and identifies potential barriers and enablers to the adoption of telehealth. The cultural differences between the organisations involved, and the impact they have on the diffusion of innovation, are considered in this study.

Methods

Clinicians across four specialist care locations were involved in data collection for this study. These included oncology healthcare teams in three NHS paediatric hospitals and a nursing team at the SSBA. At the end of the study the clinical teams were asked to reflect on their overall experience, lessons learned, and their perceptions on the way the service could be further developed. This final engagement was conducted as a face to face semi structured interview which lasted up to one hour. Interviewees included seven paediatric

outreach oncology nurses, four medical consultants, as well as two specialist nurses and an outreach worker from the SSBA. Interviews were recorded, transcribed, and analyzed for common themes, and the findings are reported here.

Results

Relative Advantage: Telehealth was introduced as a tool to enhance current services, rather than replacing them. In the NHS the potential advantages were also seen as a possible threat to future roles for staff. By contrast, the staff at the SSBA perceived the new remote service as an opportunity to affirm their key role within the organisation and cement the commitment of the organisation to continue to offer specialist nursing support to users. **Complexity:** In the NHS there is a low tolerance to the failure of clinical technology. Many interviewees noted their frustration with rigid clinical IT systems and the level of support they received from their dedicated IT helpdesk. **Trialability:** Staff in the NHS were limited to the approved and available set-up, within their clinical areas, which often was a large Video Conferencing (VC) suite. SSBA staff trialed a number of technologies and opted to use SKYPE which they found easy to use. This meant that many more users were able to download the software on their own machines at home.

Conclusion

A number of attributes, aligned with the diffusion of innovation theory, served to illustrate the findings from data gathered in both the public and the third sector organizations. The plan of introducing telehealth in the complex organizations, such as the NHS in the UK, would require development of a culture of innovation. It needs a shift in organizational mindset, and a significant change in the perceptions of risks and attitudes towards failure.

References

- [1].Levy S, Henderson L, McAlpine C. Growing up with confidence: using telehealth to support continence self-care deficits amongst young people with complex needs. *Informatics in Primary Care*. 2014;21(3):113-7.
- [2].Levy S, Steele G. End-of-life and living technologies, the role of telemedicine in palliative care of children and young people. *PervasiveHealth*; 2011.

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